



## National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology, Tiruchirappalli	19-10-2022	Till date
Assistant Professor	National Institute of Technology, Patna	16-08-2018	18-10-2022

### 8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	NIT Tiruchirappalli	2016		
M.Tech	NIT Tiruchirappalli	2012	First	Industrial Engineering
B.E	PSG College of Technology, Coimbatore	2010	First	Production Engineering

### 9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
	Not Applicable		

### 10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
	Not Applicable		

### 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2012	Rank Holder	NIT Tiruchirappalli
2012	Best paper award	Indian Institute of Technology-Banaras Hindu University, Varanasi

### 12. Fellowships

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Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2010	Assistantship	Ministry of Human Resource Development (MHRD), India	July, 2010	July 2012
2012	Research Fellowship	Ministry of Human Resource Development (MHRD), India	September 2012	June 2015

13. Details of Academic Work

**a. Curriculam Development**

- Proposed Sustainability in Manufacturing for M.Tech (Production Engineering), NIT Patna

**b. Courses Taught**

- Engineering Mechanics
- Engineering Graphics
- Supply chain management
- Project Management
- Operations Research
- Total Quality Management
- Lean Manufacturing System
- Sustainability in Manufacturing
- Production and Operations Management

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Not Applicable				

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
Not Applicable			

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16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
International conference on Automobile, Mechanical and Marine Engineering	International	Organizing Secretary	Sri Venkateswara College of Engineering	Sri Venkateswara College of Engineering, Chennai
National workshop on Renewable Energy and its applications	National	Organizing Secretary	TEQIP III, NIT, Patna	NIT Patna

18. Invited Talks delivered

Topic	Date	Inviting organization
Design of Experiments for Engineers	29 – 12 – 2017	Guest lecture for Final year students, Mahendra College of Engineering, Tamil Nadu, India
Sustainable Supply Chain Management – Barriers, Pressures and Drivers	26 – 02 - 2020	Logistics and Supply chain Research Event, at Centre for Supply Chain Improvement, University of Derby, Derby, United Kingdom
Green Manufacturing - Concept and future trends	24 – 05 - 2020	FDP on Industrial Revolution post COVID'19 organized by ADHI college of engineering and technology, Chennai, India
Contempory Design and Future Trends	15 – 05 – 2020	FDP on Green Manufacturing: the present and Future organized by Santhiram Engineering College, AP, India
An Overview of Various Multi Criteria Decision Making Techniques for Solving Research Problems	07 – 08 - 2020	FDP on Advanced optimization techniques for research problem solving Organized by Mahatma Gandhi Institute of Technology, Telangana, India
Technical Session Chair	05 – 08 – 2020	International Conference on Future Learning aspects of Mechanical Engineering 2020, Organized by Amity University, UP, India

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New Age Materials and Technologies	06-10-2021	FDP Organized by Sree Vidhyanikethan college of Engineering, AP
Session chair	5th - 7th August 2021	PRIME-2021 organized by Department of Mechanical Engineering ,NIT Patna
National Technical Advisory Committee	3rd – 4th April 2020	3rd International conference on Advanced Material and Modern Manufacturing,
Recent developments in Wire Arc Additive Manufacturing	28-09-2021	Two Week Faculty Development Program on ‘Advanced Materials and Manufacturing Technology’ organized by SRM Easwari Engineering College, Chennai, Tamil Nadu
Green Manufacturing - Concept and future trends	24-05-2020	One Week Faculty Development Program on Industrial Revolution on Post COVID"19 organized by ADHI college of engineering and technology, Chennai, India
Bill of Material for Material Requirement Planning	08-11-2020	4thYear Mechanical Engineering Students, School of Mechanical Engineering, VIT Vellore
Recent advances in Green and Sustainable Manufacturing	09-03-2021	FDP Organizaed by Siddarth College of Engineering and Technology, AP
Sustainable Manufacturing - Emerging Research Areas	19th November 2020	Technology Mission "Green and Sustainable Manufacturing Organized by Karunya University, Coimbatore on
Wire Arc Additive Manufacturing - Process, defects and strategies	04-08-2021	One Week Faculty Development Program on ‘Applications of Artificial Intelligence in Modern Manufacturing’ in organized by Karunya Institute of Technology and Sciences, Tamil Nadu

**19. Membership of Learned Societies**

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Membership No. with date
Member	Indian Welding Society	L01705
Member	Institute of Engineering (India)	M1692946

**20. Academic Foreign Visits**

Country	Duration of Visit	Programme
United Kingdom	1 Week	GCRF Networking Grant application Preparation work

**21. Publications**

(A) Refereed Research Journals:

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<b>S. No</b>	<b>Authors</b>	<b>Title</b>	<b>Journal title</b>	<b>Year</b>	<b>Volume and Issue no.</b>
1	Vimal, KEK & Vinodh, S	Leanness evaluation using IF– THEN rules	The International Journal of Advanced Manufacturing Technology	2012	63(1-4), 407-413
2	Vinodh, S., & Vimal, KEK	Thirty criteria based leanness assessment using fuzzy logic approach.	The International Journal of Advanced Manufacturing Technology	2012	60(9-12), 1185-1195
3	Vimal, K. E. K., & Vinodh, S.	Application of artificial neural network for fuzzy logic based leanness assessment.	Journal of Manufacturing Technology Management	2013	24(2), 274-292
4	Vinodh, S., Devadasan, S. R., Vimal, KEK., & Kumar, D	Design of agile supply chain assessment model and its case study in an Indian automotive components manufacturing organization.	Journal of Manufacturing Systems	2013	32(4), 620-631
5	Vimal, KEK, Vinodh, S., & Muralidharan, R.	An approach for evaluation of process sustainability using multi-grade fuzzy method.	International Journal of Sustainable Engineering	2014	8 (1), 40-54
6	Vinodh, S., Kumar, S. V., & Vimal, KEK.	Implementing lean sigma in an Indian rotary switches manufacturing organisation	Production Planning & Control	2014	25(4), 288-302
7	Vimal, KEK., Vinodh, S., & Raja, A	Modelling, assessment and deployment of strategies for ensuring sustainable shielded metal arc welding process—a case study	Journal of Cleaner Production	2015	93 364-377
8	R.Mohanraj, M.Sakthivel, S.Vinodh, K.E.K.Vimal	Development of Value Stream Map for an Indian automotive components Manufacturing organization	Journal of Engineering, Design and Technology	2015	13(3), 1-24
9	Vimal, K. E. K., & Vinodh, S.	Development of checklist for evaluating sustainability characteristics of manufacturing processes	International Journal of Process Management and benchmarking	2015	3 (2), 213-232
10	Vimal KEK and Vinodh S	LCA integrated ANP framework for selection of sustainable manufacturing processes	Environmental Modeling and Assessment	2016	21 (4), 507-516
11	JeyaGirubh, Vinodh S, and Vimal	Application of Interpretative Structural Modelling integrated Multi Criteria Decision Making	Journal of Modelling in Management	2016	11 (2), 358-388

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	KEK	methods for sustainable supplier selection			
12	Vimal, KEK, Vinodh S, Brajesh P and Muralidharan R	Rapid prototyping process selection using multi criteria decision making considering environmental criteria and its decision support system	Rapid Prototyping Journal	2016	22 (2) 225-250
13	Vimal, KEK, Vinodh, S., & Anand G	Modelling and analysis of sustainable manufacturing system using a digraph-based approach	International Journal of Sustainable Engineering	2017	1-15 (in press)
14	Vimal, KEK., Vinodh, S., & Raja, A.	Optimization of process parameters of SMAW process using NN-FGRA from the sustainability view point	Journal of Intelligent Manufacturing	2017	28 (6) 1459-1480
15	K Sivakumar, R Jeyapaul, Vimal KEK, Pratthosh	A DEMATEL approach for evaluating barriers for sustainable end-of-life practices	Journal of Manufacturing Technology Management	2018	29 (6) 1065-1091
16	Vimal KEK, Sonu Rajak and Jayakrishna	Analysis of network design for a circular production system using multi-objective mixed integer linear programming model	Journal of Manufacturing Technology Management	2019	N/A
17	T Sakthi Nagaraj , R Jeyapaul, K.E.K Vimal and K Mathiyazhagan	Integration of human factors and ergonomics into lean implementation: ergonomic-value stream map approach in the textile industry	Production Planning & Control	2019	30 (15), 1265–1282
19	J Jayakumar, Jayakrishna K. VimalK.E.K.,and S Hasibuan	Modelling of sharing networks in the circular economy	Journal of Modelling in Management	2020	N/A
20	M Ethirajan, T Arasu M, J Kandasamy, V KEK, SP Nadeem, A Kumar	Analysing the risks of adopting circular economy initiatives in manufacturing supply chains	Business Strategy and the Environment	2021	30 (1), 204-236
21	KEK Vimal, K Mathiyazha	Analysis of barriers that impede the elimination of single-use plastic in developing economy	Journal of Cleaner Production	2021	272, 122629

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	gan, V Agarwal, S Luthra, K Sivakumar	context			
22	KEK Vimal, J Kandasamy, AA Duque	Integrating sustainability and remanufacturing strategies by remanufacturing quality function deployment (RQFD)	Environment, Development and Sustainability	2021	23 (9), 14090- 14122
23	KEK Vimal, ML Tseng, S Raju, M Cherukuri, A Ashwithi, J Kandasamy	Circular function deployment: a novel mathematical model to identify design factors for circular economy	Environment, Development and Sustainability, 1-34	2021	N/A
24	P Goel, N Sharma, K Mathiyazha gan, KEK Vimal	Government is trying but consumers are not buying: A barrier analysis for electric vehicle sales in India	Sustainable Production and Consumption	2021	N/A
25	A Poduval, MS Ayyagari, M Malinda, V KEK, A Kumar, J Kandasamy	Barriers in repurposing an existing manufacturing plant: a total interpretive structural modeling (TISM) approach	Operations Management Research, 1-26	2021	N/A
26	J Kandasamy, SP Nadeem, A Kumar, V KEK, HB Nikhil, NH Solanki	Economic and environmental feasibility of re-routing the Indo-Sri Lankan shipping channel: A green initiative of sustainable development	Sustainable Development	2021	N/A
27	A Alagumalai, C Qin, KEK Vimal, E Solomin, L Yang, P Zhang, T Otanicar, ...	Conceptual analysis framework development to understand barriers of nanofluid commercialization	Nano Energy	2022	N/A
28	KEK Vimal, V Agarwal, K	Barriers in the adoption of buyback schemes for used plastic packaging material—a contextual	Resources, Conservation and Recycling	2022	N/A



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	Mathiyazhagan	relationship analysis			
29	Rapid Prototyping Journal	Selection for additive manufacturing using hybrid MCDM technique considering sustainable concepts	M Chandra, F Shahab, KEK Vimal, S Rajak	2022	N/A

(B) Conferences/Workshops/Symposia Proceedings

1. **K.E.K.Vimal** and S.Vinodh, (2011), “Lean Function Selection using Multi-Criteria Decision Making Method”, *5<sup>th</sup> International Conference on Advances in Mechanical Engineering (ICAME-2011)* conducted by the Department of Mechanical Engineering, **S.V.National Institute of Technology Surat, Gujarat**, during June23-6-8, 2011. The papers were given in the form of a booklet. This paper appeared in pages 606-610 of this booklet. This paper was presented by **Vimal KEK**.
2. **K.E.K.Vimal** and S.Vinodh (2011),“Lean concept selection using Multi-Criterion Decision Making approach”, *International Conference on Sustainable Manufacturing: Issues, Trends, and Practices (ICSM 2011)* held at **Birla Institute of Technology and Science (BITS) Pilani**, Pilani during November 10-12, 2011. The proceedings were given in the form of a booklet. This paper appeared in pages 231-234 of this booklet. This paper was presented by **Vimal KEK**.
3. Kandasamy Jayakrishna, S.Vinodh and **K.E.K.Vimal** (2011),“Sustainable concept selection using ANP”, 2011 *International Conference on Advances in Supply Chain and Manufacturing Management (ASCOMM 2011)* held at **Indian Institute of Technology, Kharagpur** during December 16-18, 2011. The proceedings were given in the form of a CD. This paper appeared in pages 231-234 of this booklet. This paper was presented by Mr. Kandasamy Jayakrishna.
4. S.Vinodh, R.Jeya Girubha and **Vimal K.E.K.** (2011) “Sustainable Concept selection using PROMETHEE”, *International Conference on Advances in Supply Chain and Manufacturing Management (ASCOMM 2011)* held at **Indian Institute of Technology, Kharagpur** during December 16-18, 2011. The proceedings were given in the form of a CD. This paper appeared in pages 201-206 of this booklet. This paper was presented by **Vimal KEK**.
5. S.Vinodh, **Vimal K.E.K.** and S Aravind Raj (2011) “Leaness assessment using Fuzzy Logic”. *International Conference on Advances in Supply Chain and Manufacturing Management (ASCOMM 2011)* held at **Indian Institute of Technology, Kharagpur** during December 16-18, 2011. The proceedings were given in the form of a CD. This paper appeared in pages 221-225 of this booklet. This paper was presented by S Aravind Raj.
6. Jaya Krishna S, Vinodh S, **Vimal, KEK**(2011),“Application of cluster analysis for the conduct of eco-friendly studies”, *26<sup>th</sup> Indian Engineering Congress*, 15-18 December 2011 – Bangalore, India The proceedings were given in the form of a CD. This paper appeared in pages 183 of this booklet. This paper was presented by S. Vinodh

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7. Aravind S, Vinodh S and **Vimal KEK** (2012)“ Agility Evaluation using Neuro Fuzzy approach, COSMAR 2012, Indian Institute of Science, Bangalore. The proceedings were given in the form of a booklet. This paper appeared in page 55 of this booklet. This paper was presented by **Aravind Raj S**
8. **Vimal KEK**, Vinodh S and Aravind S (2012)“A mathematical model to evaluate the workforce role in agile environment”, *International conference on Agile manufacturing, 2012*,**Indian Institute of Technology-Banaras Hindu University**. The proceedings were given in the form of a booklet. This paper appeared in pages 231-234 of this booklet. This paper was presented by **Vimal KEK**.
9. Jeya Girubha R, Devadasan SR, Vinodh S and **Vimal KEK** (2014), “Literature review on application of MCDM methods in material selection”*Second International Conference on Advances in Industrial Engineering Applications (ICAIEA)* organized by **Anna University, Chennai**, India January 06-08, 2014. The proceedings were given in the form of CD. This paper appeared in pages 143 of this booklet, This paper was presented by **Vimal KEK**
10. **Vimal KEK** and Vinodh S (2014) “Scoring approach for evaluation of process sustainability characteristics” *Second International Conference on Advances in Industrial Engineering Applications (ICAIEA)*organized by **Anna University, Chennai**, India January 06-08, 2014. The proceeding is given in the form of a CD. This paper appeared in pages 159 of this booklet, This paper was presented by **Vimal KEK**
11. Adarsh Singh, Vinodh S, **Vimal KEK** (2014), “Application of remanufacturing principles to an automotive engine valve component” *5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014*, organized by **IIT Guwhathi** duringDecember 12-14, 2014. The proceedings were given in the form of a CD. This paper appeared in pages 143 of this booklet, This paper was presented by S. Vinodh
12. **Vimal KEK**, & Vinodh S (2014) “Application of S-LCA methodology for assessment of automobile organization” *5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014*, organized by **IIT Guwhathi** duringDecember 12-14, 2014. The proceedings were given in the form of a CD. This paper appeared in pages 100 of this booklet, This paper was presented by **Vimal KEK**.
13. Manjunatheswara S, Vinodh and **Vimal KEK** (2014) “Application of Grey based decision making approach for lean tool selection” *5th International and 26th All India Manufacturing Technology, Design and Research Conference AIMTDR 2014*, organized by **IIT Guwhathi** duringDecember 12-14, 2014. The proceedings were given in the form of a CD. This paper appeared in pages 186 of this booklet, This paper was presented by Manjunatheswara S.
14. **Vimal KEK** and Vinodh S (2015) “Modeling the manufacturing process considering environmental impacts”. *International Conferene on Advances in Production and Industrial Engineering INCAPIE 2015*, Organized by NIT Trichy

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during Febraury 20-21, 2015. The proceedings were given in the form of a CD. This paper appeared in pages 17 of this booklet, This paper was presented by **Vimal KEK**.

15. Vimal KEK, P Sasikumar, I Adhavan, L Logesh and Hari Krishnan (2016) “Application of lean principles in a job shop organization – A case study”. International conference on Materials, Design amd Manufacturing process organized by Anna University Chennai during Febraury 17-19, 2016. The proceeding were given in the form of CD. This paper appeared in page 516 -519 of this booklet, This paper was presented by I Adhavan.

### (C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
K. Jayakrishna, K.E.K. Vimal, S. Aravind Raj, K.M.A.K. Kulatunga, Mohamed Thariq Hammed Sultan, and J. Paulo Davim	Sustainable Manufacturing for Industry 4.0: An Augmented Approach	CRC Press, USA	November 2020	
Kaliyan Mathiyazhan, K. E. K. Vimal, Harish Kumar, Anbanandam Ramesh, Vernika Agarwal	Lean and Green Manufacturing	Springer Publisher	November 2021	